



PATENT

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April 28, 2004

Date

Ayesha J. Shaikh

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/691,122

Confirmation No. : 5347

Applicants : Mark A. Moehring, Arne H. Voie and Merrill P. Spencer

Filed : October 21, 2003

Attorney Docket No.: 500581.08 (29666/US/2)

Art. Unit : 3737

Customer No. : 27,076

Examiner : Not Yet Assigned

Title : METHOD AND APPARATUS COMBINING DIAGNOSTIC ULTRASOUND WITH
THERAPEUTIC ULTRASOUND TO ENHANCE THROMBOLYSIS

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
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Sir:

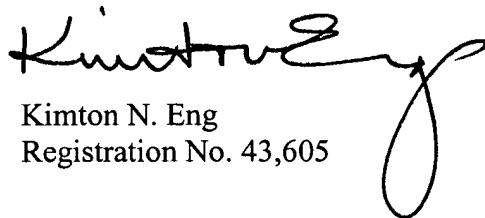
In accordance with 37 C.F.R. §§ 1.56 and 1.97 through 1.98, applicants wish to make known to the Patent and Trademark Office the references set forth on the attached form PTO-1449. This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior Application No. 09/500,708, filed February 9, 2000, issued October 21, 2003 as Patent No. 6,635,017. References AA-AC, AE-AG and AI-AL listed on the attached Form PTO-1449 were submitted to and/or cited by the Patent and Trademark Office in this prior application and, therefore, are not required to be provided in this application. If the Examiner wishes, copies will be provided upon request. Applicants also wish to make known to the Patent and Trademark Office references AD, AH and AM-BG (copies of these cited references, as required under 37 C.F.R. § 1.98, are enclosed). Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty to disclose all information they are aware of

which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Respectfully submitted,

DORSEY & WHITNEY LLP



Kimton N. Eng
Registration No. 43,605

KNE:ajs

Enclosures:

Postcard
Form PTO-1449
Cited References (23)

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FORM PTO-1449
(REV.7-80)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
500581.08 (29666/US/2)APPLICATION NO.
10/691,122

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

MAY 03 2004

APPLICANT(S)
Mark A. Moehring et al.FILING DATE
October 21, 2003GROUP ART UNIT
3737

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA	4,622,978	11/18/86	Matsuo et al.	128	663	
AB	4,757,820	07/19/88	Itoh	128	660	
AC	5,307,816	05/03/94	Hashimoto et al.	128	660.03	
AD	5,399,158	03/21/95	Lauer et al.	604	22	
AE	5,509,413	04/23/96	Akama et al.	128	660.02	
AF	5,509,896	04/23/96	Carter	604	21	
AG	5,558,092	09/24/96	Unger et al.	128	660.03	
AH	5,695,460	12/09/97	Siegel et al.	604	21	
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AK	6,102,860	08/15/00	Mooney	600	443	
AL	6,196,972 B1	03/06/01	Moehring	600	454	

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AM	WO 01/58337 A3	08/16/01	PCT				

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AN	Akiyama, M. et al., "Low-Frequency Ultrasound Penetrates The Cranium and Enhances Thrombolysis In Vitro", Neurosurgery, Volume 43, Number 4, October 1998, pp. 828-833.
AO	Apfel, R. et al., "Gauging The Likelihood Of Cavitation From Short-Pulse, Low-Duty Cycle Diagnostic Ultrasound", Ultrasound in Med. & Biol., Volume 17, Number 2, 1991, pp. 179-185.
AP	Behrens, S. et al., "Low-Frequency, Low-Intensity Ultrasound Accelerates Thrombolysis Through The Skull", Ultrasound In Med. & Biol., Volume 25, Number 2, 1999, pp. 269-273.

EXAMINER	DATE CONSIDERED
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* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

FORM PTO-1449 (REV.7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 500581.08 (29666/US/2)	APPLICATION NO. 10/691,122
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S) Mark A. Moehring et al.	
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AQ	Braaten, J. et al., "Ultrasound Reversibly Disaggregates Fibrin Fibers", Thromb Haemost, 1997, pp. 1063-1068.
AR	Demchuk, A. et al., "Clinical Recovery From Acute Ischemic Stroke After Early Reperfusion Of The Brain With Intravenous Thrombolysis", The New England Journal of Medicine, Volume 340, Number 11, March 1999, pp. 894-895.
AS	Deng, C. et al., "In Vitro Measurements of Inertial Cavitation Thresholds In Human Blood", Ultrasound In Medicine and Biology, Volume 22, Number 7, 1996, pp. 939-948.
AT	Francis, C. et al., "Ultrasound Accelerates Transport of Recombinant Tissue Plasminogen Activator Into Clots", Ultrasound In Med. & Biol., Volume 21, Number 3, 1995, pp. 419-424.
AU	Kashyap, A. et al., "Acceleration Of Fibrinolysis By Ultrasound In A Rabbit Ear Model Of Small Vessel Injury", Fibrinolysis And Ultrasound, Volume 76, Number 5, 1994, pp. 475-485.
AV	Kornowski, R. et al., "Does External Ultrasound Accelerate Thrombolysis? Results From A Rabbit Model", Circulation, Volume 89, Number 1, January 1994, pp. 339-344.
AW	Lauer, C. et al., "Effect Of Ultrasound On Tissue-Type Plasminogen Activator-Induced Thrombolysis", Circulation, Volume 86, Number 4, October 1992, pp. 1257-1264.
AX	Luo, H. et al., "Enhancement Of Thrombolysis By External Ultrasound", American Heart Journal, Volume 12, Number 6, 1993, pp. 1564-1569.
AY	Marler, John R., "Tissue Plasminogen Activator For Acute Ischemic Stroke", The New England Journal of Medicine, Volume 333, Number 24, December 1995, pp. 1581-1587.
AZ	Martin, C. et al., "A Study Of Streaming In Plant Tissue Induced By A Doppler Fetal Heart Detector", Ultrasound In Med. & Biol., 1978, Volume 4, pp. 131-138.
BA	Overgaard, Karsten, "Thrombolytic Therapy In Experimental Embolic Stroke", Cerebrovasc Brain Metab Rev, Volume 6, Number 3, 1994, pp. 257-272.
BB	Riggs, P. et al., "Ultrasound Enhancement Of Rabbit Femoral Artery Thrombolysis", Cardiovascular Surgery, Volume 5, Number 2, April 1997, pp. 201-207.
BC	Russel, D. et al., "Tissue Plasminogen Activator Cerebrovascular Thrombolysis In Rabbits Is Dependent On The Rate And Route Of Administrations", Stroke, Volume 23, Number 3, March 1992, pp. 388-393.
BD	Siddiqi, F. et al., "Binding Of Tissue-Plasminogen Activator To Fibrin: Effect Of Ultrasound", Blood, Volume 91, Number 6, March 1998, pp. 2019-2025.

EXAMINER

DATE CONSIDERED

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PATENT & TRADEMARK OFFICE
CABOTHER PRIOR ART *(Including Author, Title, Date, Pertinent Pages, Etc.)*

BE	Suchkova, V. et al., "Enhancement of Fibrinolysis With 40-kHz Ultrasound", University of Rochester, New York, September 8, 1998, pp. 1030-1035.
BF	Tachibana, Katsuro, "Enhancement of Fibrinolysis with Ultrasound Energy", Journal of Vascular and Interventional Radiology, Volume 3, Number 2, May 1992, pp. 299-303.
BG	Zivin, Justin A., "Thrombolytic Stroke Therapy. Past, Present, and Future", American Academy of Neurology, 1999, pp. 14-19.
BH	
BI	
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